

Tab 1

CONFIDENTIAL (UNCLASSIFIED WHEN DETACHED FROM ACCOMPANYING MEMORANDUM)

TABLE 1.

United States Exports to the U.S.S.R. and European Satellites (ex Poland), Total and by Commodity Groups, 1947-57 and Jan-Sept 1958  
(Thousands of Dollars)

	1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Jan-Sept 1958
<b>Exports,</b>												
<b>Total</b>	222,151	67,566	38,510	17,808	2,133	810	1,154	4,532	3,941	7,523	13,036	4,467
<b>U.S.S.R.</b>	149,068	27,879	6,617	752	55	20	19	216	232	3,823	3,504	1,060
<b>Satellites</b>	83,083	39,687	31,893	17,056	2,078	790	1,135	4,316	3,689	3,700	9,532	3,407
<b>Animals and Animal Products, Edible</b>												
<b>Total</b>	11,473	6,573	969	371	-	-	-	64	63	36	2,385	
<b>U.S.S.R.</b>	3,653	3	45	45	-	-	-	-	63	36	-	
<b>Satellites</b>	7,820	6,570	762	326	-	-	-	64	-	-	2,385	
<b>Animals and Animal Products, Inedible</b>												
<b>Total</b>	2,535	785	602	387	481	6	1	673	1,056	1,055	4,648	
<b>U.S.S.R.</b>	603	2	1	(1)	-	-	-	17	27	-	2,399	
<b>Satellites</b>	1,932	783	601	387	481	6	1	656	1,029	1,055	2,249	
<b>Vegetable Food Products and Beverages</b>												
<b>Total</b>	12,589	1,146	786	170	17	(1)	1	3,198	1,758	2,123	671	
<b>U.S.S.R.</b>	117	7	1	1	-	(1)	-	3,198	1,758	1,157	671	
<b>Satellites</b>	12,472	1,139	785	169	17	(1)	1	-	-	966	-	
<b>Vegetable Products, Inedible, Except Fibers and Wood</b>												
<b>Total</b>	13,577	6,200	4,365	3,292	767	620	1,079	251	239	577	963	
<b>U.S.S.R.</b>	2,053	1,157	1,046	81	(1)	(1)	(1)	-	-	102	18	
<b>Satellites</b>	11,524	5,133	3,319	3,211	767	620	1,079	251	239	475	945	
<b>Textile Fibers and Manufactures</b>												
<b>Total</b>	9,756	5,393	20,967	8,433	4	13	(1)	56	131	45	104	
<b>U.S.S.R.</b>	2,220	512	4,487	2	(1)	(1)	-	-	-	3	3	
<b>Satellites</b>	7,536	4,881	16,480	8,431	4	13	(1)	56	131	42	103	
<b>Wood and Paper</b>												
<b>Total</b>	358	279	324	235	114	3	1	5	357	195	131	
<b>U.S.S.R.</b>	66	8	2	-	-	-	(1)	1	-	12	29	
<b>Satellites</b>	292	271	322	235	114	3	1	4	357	183	102	
<b>Nonmetallic Minerals</b>												
<b>Total</b>	6,821	1,411	90	62	11	-	2	4	3	13	1,688	
<b>U.S.S.R.</b>	5,186	645	-	-	-	-	1	-	-	6	2	
<b>Satellites</b>	1,635	766	90	62	11	-	1	4	3	7	1,686	
<b>Metals and Manufactures, Except Machinery and Vehicles</b>												
<b>Total</b>	20,182	2,338	59	31	10	3	-	-	10	379	19	
<b>U.S.S.R.</b>	16,971	391	1	1	-	(1)	-	-	-	364	13	
<b>Satellites</b>	3,211	1,947	58	30	10	3	-	-	10	15	6	
<b>Machinery and Vehicles</b>												
<b>Total</b>	174,209	31,488	5,741	2,141	306	12	14	7	19	2,370	1,390	
<b>U.S.S.R.</b>	106,973	23,347	466	200	1	4	4	1	8	1,998	563	
<b>Satellites</b>	15,236	8,141	5,275	1,851	305	8	10	6	11	372	827	
<b>Chemicals and Related Products</b>												
<b>Total</b>	7,558	3,141	2,206	1,318	185	8	(1)	218	161	276	623	
<b>U.S.S.R.</b>	1,682	208	51	117	16	-	-	179	129	14	301	
<b>Satellites</b>	5,876	2,933	2,155	1,201	169	8	(1)	39	29	262	322	
<b>Miscellaneous and Reexports</b>												
<b>Total</b>	23,093	8,722	2,401	1,368	238	145	56	56	144	454	414	
<b>U.S.S.R.</b>	7,544	1,599	355	215	38	16	14	18	22	131	178	
<b>Satellites</b>	15,549	7,123	2,046	1,153	200	129	42	38	122	323	236	

Note: European Soviet Satellites included are Albania, Bulgaria, Czechoslovakia, Estonia, Soviet Zone of Germany, Hungary, Latvia, Lithuania, and Rumania. Exports to U.S.S.R. exclude those to Estonia, Latvia, and Lithuania.  
Data include U.S.S.R.A. exports in the year 1947 valued as follows in thousands of dollars: Total - 51,153; U.S.S.R. - 2,072; and Satellites - 19,081.  
Exports to U.S.S.R. in the year 1947 also include license exports valued at \$16,000 thousand.  
(1) Less than \$500.

Prepared by: International Economic Analysis Division -  
Bureau of Foreign Commerce, United States  
Department of Commerce  
February, 1959

\* DOC Exempt Letter In ERU File \*

TABLE 2.

United States Imports from the U.S.S.R. and European Satellites (Ex Poland), Total and by Commodity Groups, 1947-57 and Jan-Sept 1958

Imports for Consumption		1947	1948	1949	1950	1951	1952	1953	1954	1955	1956	1957	Jan-Sept 1958
<b>Animals and Animal Products, Edible</b>													
Total USSR		97,600	114,077	66,600	70,858	61,855	28,922	20,383	21,255	20,169	38,359	30,945	24,483
Satellites		72,152	86,186	42,463	40,322	32,312	16,877	10,780	11,794	17,005	24,583	16,516	13,776
Total		169,752	200,263	109,063	111,180	94,167	45,800	31,163	33,049	37,174	62,942	47,461	38,259
<b>Animals and Animal Products, Inedible</b>													
Total USSR		1,419	1,615	2,515	3,814	1,176	1,125	461	648	923	1,218	1,487	790
Satellites		1,373	1,609	2,470	3,632	1,053	1,088	390	421	262	337	864	187
Total		2,792	3,224	4,985	7,446	2,229	2,213	851	1,069	1,185	1,555	2,351	977
<b>Vegetable Food Products and Beverages</b>													
Total USSR		45,113	44,350	28,806	25,646	25,858	15,762	9,258	9,691	10,165	8,652	6,643	6,280
Satellites		42,660	41,074	25,730	21,527	22,689	13,283	8,079	8,987	9,074	7,874	5,810	5,528
Total		87,773	85,424	54,536	47,173	48,547	29,045	17,337	18,678	19,239	16,526	12,453	11,808
<b>Vegetable Products, Inedible, Except Fibers and Wood</b>													
Total USSR		259	359	804	1,088	1,363	501	333	450	159	375	506	651
Satellites		2	1	5	( )	( )	2	( )	( )	3	4	3	140
Total		261	360	809	1,088	1,363	503	333	450	162	379	509	695
<b>Textile Fibers and Manufactures</b>													
Total USSR		8,590	8,215	6,769	9,456	12,413	1,837	1,000	699	1,582	970	1,240	778
Satellites		2,435	2,803	2,587	3,559	5,944	719	496	333	807	482	597	210
Total		11,025	11,018	9,356	13,015	18,357	2,556	1,496	1,032	2,389	1,452	1,837	988
<b>Wood and Paper</b>													
Total USSR		4,317	4,985	2,701	3,024	1,695	1,430	973	1,524	1,624	1,506	2,349	1,739
Satellites		3,375	6,095	6,082	9,096	8,315	655	548	1,139	1,121	1,534	1,978	1,186
Total		7,692	11,080	8,783	12,120	10,010	2,085	1,521	2,663	2,745	3,040	4,327	2,925
<b>Nonmetallic Minerals</b>													
Total USSR		578	161	289	1,198	409	172	177	193	142	182	189	152
Satellites		493	61	33	664	1	1	19	( )	1	( )	2	2
Total		1,071	222	322	1,862	409	173	196	193	143	182	191	154
<b>Metals and Manufactures, except Machinery and Vehicles</b>													
Total USSR		8,529	8,096	5,083	4,866	4,919	1,446	1,255	1,197	1,787	3,133	2,930	1,786
Satellites		1,374	2,786	698	260	188	208	41	32	3	32	( )	3
Total		9,903	10,882	5,781	5,126	5,107	1,654	1,296	1,229	1,790	3,165	2,930	1,789
<b>Machinery and Vehicles</b>													
Total USSR		20,601	25,791	9,627	7,614	1,965	170	735	418	1,190	3,513	1,165	1,632
Satellites		19,162	24,071	7,787	5,797	428	1	644	338	1,127	3,403	954	1,376
Total		39,763	49,862	17,414	13,411	2,393	169	1,379	756	2,317	6,916	2,119	3,008
<b>Chemicals and Related Products</b>													
Total USSR		807	1,023	217	336	209	341	253	440	376	1,265	1,463	1,896
Satellites		( )	( )	( )	( )	( )	1	( )	( )	( )	167	12	( )
Total		807	1,023	217	336	209	340	253	440	376	1,432	1,475	1,896
<b>Miscellaneous</b>													
Total USSR		328	1,651	1,012	2,645	1,439	2,930	3,238	1,943	6,776	12,421	9,956	6,963
Satellites		184	845	364	1,752	248	( )	( )	( )	3,965	10,614	7,009	5,798
Total		512	2,496	1,376	4,397	1,687	2,930	3,238	1,943	10,741	23,035	16,965	12,761
<b>Note: USSR excludes Estonia, Latvia and Lithuania. European Satellites included are Albania, Bulgaria, Czechoslovakia, Soviet Zone of Germany (beginning 1952), Hungary, Rumania, Estonia, Latvia and Lithuania.</b>													

Prepared by: International Economic Analysis Division -  
Bureau of Foreign Commerce, United States  
Department of Commerce  
February, 1959

Table 3.

European COCOM Exports to the U.S.S.R. and  
European Satellites (ex. Poland), Total and  
by Commodity Groups, 1954-57  
(thousands of dollars)

	1954	1955	1956	1957
Exports, total	626,622	715,645	876,338	989,072
USSR	221,645	235,772	373,994	384,071
Satellites	404,977	479,873	502,344	605,001
Food:				
Total	189,032	182,390	137,485	164,538
USSR	59,016	37,985	21,668	53,489
Satellites	130,016	144,405	115,817	111,049
Beverages and tobacco:				
Total	25,244	19,674	31,339	46,070
USSR	6,395	1,377	4,430	5,528
Satellites	18,849	18,297	26,909	40,542
Crude materials:				
Total	101,928	120,036	169,718	141,447
USSR	24,082	37,009	97,884	54,966
Satellites	77,846	83,027	71,834	86,481
Mineral fuels and related materials:				
Total	17,036	14,978	10,819	9,062
USSR	4	--	32	8
Satellites	17,032	14,978	10,787	9,054
Fats and oils:				
Total	21,322	23,942	26,598	25,546
USSR	12,069	11,478	11,647	11,645
Satellites	9,253	12,464	14,951	13,901
Chemicals:				
Total	43,066	56,035	67,869	83,707
USSR	5,469	4,027	8,879	13,078
Satellites	37,597	52,008	58,990	70,629
Manufactured goods:				
Total	140,500	179,010	272,404	337,814
USSR	51,039	56,581	118,001	146,676
Satellites	89,461	122,429	154,403	191,138
Machinery:				
Total	56,940	71,627	79,916	127,851
USSR	37,052	46,890	39,335	58,031
Satellites	19,888	24,737	40,581	69,820
Transport equipment:				
Total	23,573	43,436	74,129	46,808
USSR	21,143	39,403	69,786	38,443
Satellites	2,430	4,033	4,343	8,365
Other merchandise:				
Total	7,981	4,517	6,061	6,229
USSR	5,376	1,022	2,332	2,207
Satellites	2,605	3,495	3,729	4,022

**NOTE:** European COCOM countries include Belgium, Denmark, France, Federal Republic of Germany, Greece, Italy, Luxembourg, Netherlands, Norway, Portugal, Turkey, and United Kingdom, European Soviet satellites included are Albania, Bulgaria, Czechoslovakia, Soviet zone of Germany, Hungary, and Rumania. Exports to USSR include those to Estonia, Latvia, and Lithuania, if any.

Prepared by: International Economic  
Analysis Division  
Bureau of Foreign Commerce  
U.S. Dept. of Commerce  
February 1959

Typical Exports Approved for Eastern Europe in Early 1948

<u>Country</u>	<u>Commodity</u>	<u>Value</u>
Rumania	Dried skimmed milk	\$ 144,000
Czechoslovakia	Small wheel tractors	70,898
USSR	Wood rosin	367,066
Bulgaria	Dry milk	210,600
Czechoslovakia	Dry milk	104,500
Hungary	Dry milk	126,200
Rumania	Dry milk	587,900
Bulgaria	Dry milk	224,000
Czechoslovakia	Dry milk	104,000
Rumania	Dry milk	220,800
Rumania	Wood rosin	348,886
Bulgaria	Penicillin	49,290
Czechoslovakia	Beckosol	48,000
Czechoslovakia	Butyl acetate	94,752
Czechoslovakia	Tabulating machines	68,090
USSR	Aluminum sulphate	48,982
Czechoslovakia	Gum rosin	581,067
Czechoslovakia	Dyes	199,000
Czechoslovakia	Cotton	130,874
USSR	Oils of citronella & lemon grass	53,760
Rumania	Wool rags	60,000
USSR	Cord clothing wire	90,970
USSR	Wool knits	204,204
USSR	Hot dip tanning line	153,000
USSR	Balance of concrete mixing plant	40,197
USSR	2 gypsum wallboard factories	383,226
USSR	Fiberboard factory	370,684
Czechoslovakia	Lard	123,125
Hungary	Penicillin	110,650
Hungary	Dyes	98,000
Czechoslovakia	Gum rosin	252,028
Czechoslovakia	Dyes	64,000
Rumania	Autos and parts	77,000
Hungary	Penicillin	76,800
USSR	Telephone exchange material	82,991
USSR	Motor generator sets	50,889
USSR	2 beard machines	1,898,767
USSR	Intensive mixers	70,000
Czechoslovakia	Industrial sewing machines & parts	108,075
Czechoslovakia	Milk dehydrating equipment	60,806
Czechoslovakia	Glass working equipment	485,000
Hungary	Penicillin	59,000
USSR	Power shovels	60,288
Czechoslovakia	50 rocker shovels	113,500
Rumania	Trucks and parts	120,316
USSR	Unloading units	160,420
Rumania	Trucks and parts	80,000
Rumania	40 Logging trailers	64,000

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Typical Exports Denied for Eastern Europe in Early 1948

<u>Country</u>	<u>Commodity</u>	<u>Value</u>
USSR	25 printing presses	\$ 295,911
Hungary	Transformer sheets	78,000
USSR	Teflon	120,000
Czechoslovakia	Bibutyl phthalate	73,000
Czechoslovakia	Ethylene glycol	58,000
Czechoslovakia	Ethyl alcohol	53,400
Czechoslovakia	Camphor	55,104
Rumania	Leather belting	86,236
Rumania	Silicon steel sheets	85,039
Czechoslovakia	Steel strip	55,213
Czechoslovakia	Ferrochrome	183,812
Czechoslovakia	Cadmium metal	63,510
Czechoslovakia	Locomotive parts	60,463
Czechoslovakia	Nickel wire	94,575
Hungary	Molybdenum wire	65,000
Hungary	Various machine tools	380,000
Rumania	Trucks	63,130
USSR	Steel mill controls	94,617
USSR	Steel mill heat treating units	70,132
Czechoslovakia	Truck tires and tubes	76,000
USSR	Conveying systems	146,065
USSR	Coal cutter parts	74,200
Czechoslovakia	Core drills	156,630
USSR	20 electric locomotives	5,600,000
Czechoslovakia	50 Aero cranes	93,570
Czechoslovakia	1 shovel	163,652
USSR	Lube oils and greases	2,828,815
USSR	4 shovels	209,978
USSR	2 electric shovels	325,655
USSR	16 Aero cranes	289,892
USSR	7 locomotive cranes	321,316
USSR	73 drilling machines	842,409
USSR	5 hoists (locomotive cranes)	201,000
USSR	Drill rods	351,951
USSR	Diesel engine parts	117,143
USSR	2 dry extrusion units	80,800
USSR	Motors and generators	99,592
Czechoslovakia	Machine tools	2,007,000
Hungary	Machine tools	98,000
USSR	Machine tools	306,000
USSR	Truck axle mfg equip.	657,910
USSR	Balance seamless tube mill	700,000
USSR	Podbielniak extractor	279,719
Hungary	Earthmoving equipment	118,000
Rumania	500 jeeps	775,000
Bulgaria	Ball bearings	169,978
Czechoslovakia	5 podbielniak extractors	111,000
Czechoslovakia	Hot and cold steel rolling mill	15,500,000

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PRESS NOTICE

REF: 944

TRADE WITH THE U.S.S.R.

The Communique issued by the Foreign Office at the conclusion of the discussions between the Prime Minister and Mr. Bulganin and Mr. Khrushchev referred to a list of machinery, equipment and ships submitted by the Soviet representatives.

The Board of Trade have now completed their examination of the list from the point of view of the strategic controls. The following is the position:-

A. Goods not affected by the strategic export controlsQuantities mentioned  
in the Russian list

Power trains with gas turbines of 5,000 k.w.	10-20 units
High frequency electric furnaces	90-120 million roubles
Electric steel smelting furnaces for 70-200 tons with magnetic stirring	6 units
Hydraulic presses for plastics with top pressure of 200 tons and side pressure of 500 tons )	10 units
Forging manipulators on rubber wheels, capacity 1-10 tons	100 units
Forging manipulators on rails, capacity 10-15 tons	20 units
Automatic transfer machines for the automobile, machine tool and tractor industries	300-400 million roubles
Special and multiple head machines for mass production	500 units
Woodworking machinery	20-30 million roubles
Equipment for cold heading, trimming and threading screws and bolts of $\frac{1}{2}$ inch and above	70 units
Nut forming machines	70 units
Automatic four-station moulding machines	up to 140 units
Automatic machines for the preparation of foundry sand	11 units

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Shell moulding machines	50 units
Automatic core blowing machines	up to 300 units
Boxlers moulding machines	up to 140 units
Moulding machines, in the line	up to 100 units
Moulding machines with a capacity of 100 boxes per hour	70 units
Core makers	65 units
Five station automatic core blowing machines	up to 100 units
Universal core blowing machines	up to 130 units
Moulding machines for boxes of 1.5m. x 1.5m capacity 20 and 40 tons	20 units
Dressing equipment for ferrous and non-ferrous ores and coal, capacity 1,000 tons per day	6 sets
Floating self propelled coal transporters with grab, capacity of bunkers 1,000 tons	3 units
Floating pneumatic grain transporters, capacity 300 tons per hour	up to 10 units
Dyeing and finishing equipment for the textile industry and light industry equipment (subject to further definition)	100-150 million roubles
Food industry equipment	50-75 million roubles
Technological equipment for the production of terylene	50-75 million roubles
Technological equipment for low pressure polyethylene production	50-75 million roubles
Complete equipment for the manufacture of concrete pipes by the centrifugal method	1 set
Printing machinery	35-50 million roubles
Broach and spline shaft grinding machines	up to 80 units
Grinding machines for grinding gear cutters and shavers	50 units
Relieving lathes	47 units

Diesel engines for ships 6,500-9,000 h.p.	50-75 units
Rubber	-
Galvanised plates	-
Tinplate	-
Wool	-
Woollen cloth	-
Cocoa beans	-
Salted herrings	-

B. The following goods are subject to embargo

Mechanical vertical forging maxi presses of 6,000 tons capacity	30 units
Hydraulic forging presses of 3-15 thousand tons capacity complete with pump-accumulator stations.	10 units
Impact hammers, capacity 100,000 kg/metres	5 units
Extrusion presses, 15-25 thousand tons capacity	2 units
Steam or air drop hammers of 15 tons rated capacity	3 units
Complete rolling mills	120-150 thousand tons
Boring machines of various types for boring up to 2,000 metres in depth	100 units
Pump and compressor equipment (including compressors, capacity 300-2,000 h.p.; high and ultra-high pressure feeding pumps)	80-100 million roubles
Gear planing machines for herringbone wheels up to a diameter of 1676 mm.	25 units
Gear cutting and shaving machines for cutting precision gears up to a diameter of 4,000 mm.	10 units
Six spindle profile milling machines	up to 25 units
Jig boring machines	45 units
Optical profile grinding machines	40 units
Universal thread grinding machines	40 units

Horizontal four and six spindle automatic lathes	40 units
Floating docks of 20,00 tons capacity	3 units
Dry cargo vessels, 10,000 tons, speed 17-18 knots	20 units
Copper and copper rolled products	

C. Goods, some types only of which are subject to embargo

Steam and water high and ultra-high pressure valves with remote control	23 million roubles
Double action steam or air drop hammers of falling weight 4-6 thousand kilogrannes	50 units
Double sided mechanical presses with an effective pressure of 500-2,000 tons	70 units
Compressors for the chemical industry	35 units
Vacuum pumps of various sizes	100 units
Equipment for the manufacture of radio valves, lighting lamps, luminescent tubes and transistors	75-100 million roubles
Radio and television equipment, measuring and control devices, communication equipment and instruments for the automatic control of technological processes	80-100 million roubles
Complete equipment for double sided glass polishing plant	1 set
Tractors 200-250 h.p. and agricultural machines	10-20 million roubles
Thread milling machines	20 units

D. Goods the export of which is subject to quantitative restriction

Stationary gas turbines of 20,000-30,000 h.p.	20-30 units
Dredgers	2 units
Fish carriers, 10,000 tons speed 14 knots	20 units
Self propelled suction dredgers, capacity up to 2,000 cubic metres per hour with suction up to depths of 18 metres	6 units

**E. Goods about which further information is needed**

Vacuum electric furnaces for smelting ferrous and non-ferrous metals	100 units
Equipment for manufacturing razor blades capacity 1 billion pieces annually	1 set
Plate straightening and section straightening machines,	16 units
Equipment for the chemical and rubber industries	100-200 million roubles
Complete equipment for manufacturing radio apparatus using printed circuits	50-75 million roubles
Medical equipment	20-30 million roubles
Laboratory equipment	10 million roubles
Planetary grinding machines	40 units
Universal milling machines for manufacturing moulding patterns	up to 100 units
Diesel engines for ships 2,000 h.p.	75-100 units
Miscellaneous equipment and spare parts	260 million roubles
Chemicals	
Iron and steel rolled products	

Details of the United Kingdom security export controls were published in the "Board of Trade Journal" on October 16, 1954 and August 20, 1955.

April 30, 1956

Board of Trade  
Horse Guards Avenue  
London, S.W.1.

Extract from Khrushchev Letter of June 2, 1958 Re Types  
of Goods Desired by USSR from U.S.

"In the opinion of the Soviet Government, cooperation between our countries in the field of the production of synthetic materials and finished articles thereof could be developed along the following lines:

Purchases by the Soviet Union of industrial equipment in the United States, including complete equipment for plants and factories;

Conclusion of agreements with firms for obtaining licenses in individual cases, for inviting American specialists to work in Soviet enterprises as consultants on the production of certain synthetic materials, and for acquainting Soviet specialists with the production of these materials and finished articles thereof. The Soviet Union, for its part, is prepared to make it possible for American specialists to learn about the achievements of the USSR in this field;

Organizations of meetings of American and Soviet scientists and specialists for discussing problems of production of synthetic materials, organization of exhibits of samples of materials, products made from them etc.;

Mutual participation of Soviet scientists in the work of scientific research institutions of the USA, and of American scientists in the work of scientific research institutions of the USSR, both with a view to exchanging experience and also to developing jointly new types of synthetic materials and technological processes.

At the same time the Soviet Union could propose a broad program for placing orders in the USA also for other types of equipment for the production of consumer goods, and for housing and public construction. Orders could be placed for refrigeration equipment; installations for air conditioning; equipment for the cellulose, paper, and wood-processing industries, the textiles, leather-footwear, and food industries; television equipment; equipment for the manufacture of packing materials; packing, packaging, and automatic vending machines; pumps and compressors; machinery for the mining industry, for the manufacture of building materials and the mechanization of construction; hoisting, transporting, and other equipment.

In addition to this, big orders could be placed for a number of industrial materials and finished products, including orders for equipment for rolling ferrous metals, pipes for city gas lines, various chemical products, medical equipment, medicines, and certain consumer goods."

**Chemical Plant and Technology Being Requested by U.S.S.R.**

acetylene from natural gas (50,000 tons)  
polyethylene and polypropylene (25/30 thousand tons, 5/10 thousand tons)  
phthalic anhydride (45,000 tons)  
acrylonitrile (two plants - each 2,900 tons)  
maleic anhydride (6,000 tons)  
ethylene recovery plant, sulfur extraction (of 70 tons per annum)  
foam polyurethane (3000 tons)  
caprolactam from aniline (10,000 tons)  
melamine (10,000 tons)  
di-isocyanate (5,000 tons)  
moltopren, soft and hard rubber foam (1,000 tons)  
hexamethylenediamine from butadiene (5-10,000 tons)  
polyvinyl pyrrolidone (180 tons)  
titaniumdioxide from tetrachloride (20,000 tons)  
titanium dioxide rutile (capacity not stated)  
viscose cord fiber (about 50 tons a day)  
polyacrylylnitrile staple fiber (15 tons a day)  
high disperse filler "airoayle" (5,000 tons)  
nylon fiber (5,100 tons)  
cellophane lacquered film (3,400 tons)  
viscose staple fiber (70 tons a day)  
terilene fiber (4 tons a day)  
acetic anhydrides (2,000 tons)  
Divinyls (50,000-70,000 tons)  
cellulose for high strength cord (100,000 tons)  
caustic soda (100,000 - 120,000 tons)

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ITEMS UNDER UNILATERAL U.S. DENIAL POLICY TO THE SOVIET BLOC

The attached list represents those items which are currently under a U.S. export denial policy to the Soviet bloc. The following explanation of the coding employed may assist in understanding the presentation:

1. The appearance of the number 4 as the fourth digit in the item number signifies that all or part of the item is under International Secondary List control; the termination of the item number with the letter U signifies that U.S. control is deemed to be effective; where no terminal U appears, a denial policy exists even though it is deemed not to be effective; all of these items are on SECL (Department of Commerce Security Export Control List).

2. The appearance of a number 5 as the fourth digit in the item number signifies that the item is not under any international list control but is under U.S. unilateral denial policy toward the Soviet bloc. The appearance or non-appearance of a terminal U has the same significance as in 1. above. All of these items are on SECL.

3. The appearance of a number 6 as the fourth digit in the item number signifies that the item is not an official part of the SECL but is under a denial policy toward the Soviet bloc in most instances because of its clear military importance even though the impact on the bloc is not deemed to be effective.

4. Under Criteria the letters A, B and C refer to the three basic criteria for strategic rating.

5. Under Criteria the numbers refer to action guides. The relevant guides are identified below:

2. Items on the International Secondary Control List which meet strategic criterion A, B or C and which can be effectively controlled by the U.S. shall be placed on SECL; shall be placed on the Positive List to prevent illegal shipments to the Sino-Soviet bloc and/or to assure the effectiveness of U.S. unilateral control; and shall be limited to or placed under a presumption of denial to the Soviet bloc as necessary to achieve a worthwhile adverse effect on Soviet bloc war potential. 1/  
(Old IMA Criterion 2(a)).

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4. Items (other than those multilaterally agreed for embargo or those covered by 2. above) which meet strategic criterion A or B and which can be effectively controlled by the U.S. shall be placed on SECL; shall be placed on the Positive List to prevent illegal shipments to the Soviet bloc and/or to assure the effectiveness of U.S. unilateral control; and shall be placed under a presumption of denial to the Soviet bloc. 1/ (Old IMA Criteria 3 and 5).
5. Items (other than those appearing on the International Lists which meet strategic criterion A or B, and are judged to be of clear military importance, but which cannot be effectively controlled by the U.S., shall not be placed on SECL (except for International Secondary Control List items which shall be listed on SECL); shall not be placed on the Positive List; but shall be placed on the Polish Exceptions List to General License GRO, and shall be under a presumption of denial to the Soviet Bloc. (Old IMA Criteria 4' and 4)).
6. Items (other than those multilaterally agreed for embargo or those covered by 2. above) which meet strategic criterion C and which can be effectively controlled by the U.S. shall be placed on SECL; shall be placed on the Positive List or on the Polish GRO exceptions list, whichever is appropriate, to prevent illegal shipments to the Soviet bloc and/or to assure the effectiveness of U.S. unilateral control; and shall be denied or limited to the Soviet bloc, as necessary, to achieve a worthwhile adverse effect on Soviet bloc war potential. 1/ (Old IMA Criteria 2' and 6).
7. Other items for which it is judged that limitation on exports would serve U.S. foreign policy or other U.S. policy objectives shall not be placed on SECL but may be placed on the Positive List or on the Polish GRO exceptions list, as necessary, and shall be limited or denied as appropriate to accomplish the desired policy objective. (Old IMA Criteria 7 and 8).

1/ As used in these guides the terms "effectively controlled by the U.S." and "effectiveness of U.S. unilateral control" means that such control of the item so identified would limit the war potential of the Sino Soviet bloc through the ability of the U.S. to significantly deprive (quantitatively or qualitatively) the bloc of materials, equipment, services or technology, either directly or indirectly through friendly Free World countries, because of the U.S. potential control position re their net Free World export availabilities to the Bloc.

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ITEMS UNDER UNILATERAL U. S. DENIAL POLICY TO THE SOVIET BLOC

<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>METALWORKING MACHINERY</u>		
001.40U	Vertical boring and turning mills, automatic cycle types.	A,B,C, 2
002.60	Jig boring machines, n.e.s.	A,B,C 5
021.60	Jig grinders, n.e.s.	A,B,C 5
022.50U	Contour band sawing and band filing machines: (a) capable of using blades less than 5/16" wide; (b) designed to permit operator to select rate of cutting speed, and to vary such speed while in operation, and to maintain at all times the desired rate of speed with a variation of less than 2%.	A 4
027.40U	Grinding machines for broaching tools, auto cycle, auto sizing.	A 2
052.40	Planer milling machines, and combination planer and planer milling machines with capacity for work pieces 72 inches (1.80m) wide and over, or 20 feet (6.0m) long and over.	B 3,5
070.50U	Horizontal impact hammers, n.e.s.	B 4
072.41U	Presses, mechanical or hydraulic, with rated pressures of 2000 tons to 5000 tons inclusive.	B,C 2
075.50U	Spinning lathes with a spindle drive motor of 15 up to and including 25 hp.	A,B,C 4,6
090.41	Die-sinking machines	A,B,C 3,5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
<u>CHEMICAL AND PETROLEUM EQUIPMENT</u>			
106.50U	Centrifugal counter-current solvent extractors, n.e.s.	B,C	4
110.50U	All mobile liquid oxygen and nitrogen generators, n.e.s.	A	4
118.60	Nitrators, batch type, with a capacity of 125 Imperial gallons (570 liters) or more.	A	5
	Centrifugal pumps (except vacuum) having all flow contact surfaces made of 10% or more chromium or nickel, either separately or combined, as follows:		
129.51U	(a) hermetically sealed, glandless (canned type);	A,B	4
129.52U	(b) designed to operate at speeds of 7000 rpm or over and produce pressures of 800 psi or more.	B,C	4,6
	Pumps (except vacuum pumps) delivering liquids separately or in combination with solids and/or gases, pipe valves and cocks, n.e.s., as follows:		
131.43U	(d) slush (mud) pumps designed to deliver at pressures of 1000 psi or over and requiring a drive rated 200 hp or over;	B,C	2,4,6
131.44U	(e) designed to deliver at pressures of 1000 psi or over and to operate at temperatures of 350°F or over;		
132.41U	Evaporator pumps	B	2
145.60	Gas cylinders (all metals and all sizes)		7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICAL AND PETROLEUM EQUIPMENT (continued)</u>		
150.41U	Oil well drilling and exploration equipment, as follows: (b) casinghead and Christmas tree assemblies over 2000 lbs. psi;	C 2,6
150.42U	(c) cementing equipment; sidewall coring equipment; gun perforating equipment; photocalinometers; bottom hole pumps; blowout preventers; draw works and rotary tables 150 hp and over;	B,C 2,4,6
150.43U	(d) well logging instruments and equipment;	B,C 2,4,6
150.51U	(h) parts and accessories, n.e.s., specially fabricated for rotary drill (except core) rigs. (This includes, but is not limited to, items such as derrick collar control gates, draw works, directional drilling equipment, formation testers, gudgeons, specialty tools, elevators, spiders, hooks, links and connectors, fishing tools, float collars, combination guide and float shoes, sockets, tongs, etc.);	B,C 5,6
150.52U	(i) petroleum and natural gas production equipment, n.e.s., and specially fabricated parts and accessories, n.e.s. (This includes, but is not limited to, items such as acidizing equipment, bottom hole chokes, casing and tubing head supports, demulsifiers, desalting and treating units, emulsion treating equipment, glycol-type gas dehydration units, pressurizing equipment, stripping and stabilizing equipment, indirect heaters, oil and gas separators, oil well fracturing blenders, oil well servicing tools, packers, screens, tubing patches, paraffin scrapers, perforating trucks, rod lifting equipment, sucker rods, tubing heads.).	B,C 5,6

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICAL AND PETROLEUM EQUIPMENT (continued)</u>		
151.40	Equipment for the extraction, production, refining or treatment of lubricants (petroleum based or synthetic), aviation fuels or components thereof, mineral oil, natural or refinery gases, and petro-chemicals, as follows: (a) processing units, the following: (1) solvent processing units (including phenol, duosol, furfural and nitrobenzene solvent extraction and propane de-asphalting units); (2) dewaxing units (including centrifugal and solvent dewaxing units such as methylethyl ketone and propane units); (3) filtration units (including percolation filtration, contact filtration, and filtrol fractionation units); (4) fractionating, rectifying and dephlegmating columns; (5) hydrogenation equipment designed to operate at 360 psi or over (except equipment specially designed for the production of ammonia or methanol); (6) dehydrogenation; (7) extracting, treating, separating or stabilizing of natural or refinery gases; (8) isomerization; (9) polymerization; (10) aromatization; (11) alkylation; (12) desulpherization; (13) thermal or catalytic cracking or reforming including platforming; (b) complete plants, including any of the above units.	Under review
154.50U	Welded or seamless steel pipe over 24 inches (61 cm) outside diameter, conforming with API specifications for line pipe.	C 6
154.60	Welded or seamless carbon and alloy steel line pipe.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>ELECTRICAL AND POWER GENERATING EQUIPMENT</u>		
260.50U	Electric generators, turbo generators and turbines designed for turbo-generators, 200,000 KW and over, and specially designed parts.	A,B,C 4
260.61	Electric generators, turbo generators, turbines designed for turbo-generators and synchronous condensers of 60,000 KW up to, but not including, 200,000 KW, and specially designed parts.	B,C 5
260.62	Electric motors of 12,500 hp and over; and automatic and semi-automatic equipment for starting, stopping, reversing and speed control of these motors.	A 5
265.40	Electric power generating units of $\frac{1}{2}$ KW or over, up to and including 5000 KW.	A 3,5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>GENERAL INDUSTRIAL EQUIPMENT</u>		
	Metal rolling mills, as follows:	
305.41U	(a) continuous 4 high hot strip and sheet mills	B,C 2
305.42U	(b) plate rolling mills	B,C 2
323.50U	Power cranes and/or shovels, full-revolving:	
	(a) crawler or walker-mounted, over 6 cu yds bucket capacity;	B,C 4,6
	(b) wagon or truck-mounted, over 6 cu yds bucket capacity or over 20 tons crane lifting capacity.	
350.41U	Carbon black furnaces, combustion type only	B 2
355.60	Radio valve making machinery, <u>except</u> :	7
	(a) machinery, equipment and test gear specially designed for the manufacture of various types of embargoed electronic valves, transistors and crystal diodes (including sub-assemblies therefor);	
	(b) machinery, equipment and test gear specially designed for automatic or semi-automatic assembly of electronic valves, transistors and crystal diodes (including components or sub-assemblies therefor).	
380.41	Compressors and blowers, n.e.s., as follows:	
	(a) compressors and blowers, n.e.s., capable of delivering air, gases, or vapors at pressures of 700 psi or over and requiring a drive rated 2000 hp or over.	B,C 3,5
385.40	Diamonds suitable for industrial use, including splints and borts.	C 3,5
385.50U	Synthetic industrial diamonds.	A,C 2
386.40	Diamond wire drawing dies.	A,C 3,5
386.60	Diamond dressers; diamond boring and turning tools; diamond core drill bits.	A,C 5
387.41U	Diamond grinding wheels.	A,C 2,5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>TRANSPORTATION EQUIPMENT</u>		
401.60	Floating docks.	A 5,7
402.61	Dredges incorporating dredging machines, as follows: (a) hydraulic type with a pump discharge diameter in excess of 30 inches; (b) ladder-bucket type with each bucket having a capacity of 9 cu ft or more.	B,C 7
402.62	Dredges other than those incorporating dredging machines.	7
402.63	Specialized dredge equipment and components, such as dredging machines, grabs, buckets, cutters, ladders, centrifugal pumps, and floating and shore pipelines, n.e.s.	7
405.61	Icebreakers of 2000 shaft hp up to 10,000 shaft hp and similar vessels 2000 shaft hp and over, principally designed for breaking ice having any of the following: (a) bow propeller; (b) special hull shape; (c) propulsion plant permitting quick reversing and development of maximum power at all speeds; (d) stern saddle arrangements for towing operation; (e) excessive electrical supplies and pumping facilities.	A 5,7
405.62	Icebreakers of under 2000 shaft hp and similar vessels designed for breaking ice having any of the following: (a) bow propeller; (b) special hull shape; (c) propulsion plant permitting quick reversing and development of maximum power at all speeds; (d) stern saddle arrangements for towing operations; (e) excessive electrical supplies and pumping facilities.	7
410.40	Tankers designed for speeds of 18 knots or less when in full load (design) condition.	C 3,7
410.60	Tank barges.	3,7
411.40	Whaling factories.	C 7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
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TRANSPORTATION EQUIPMENT (continued)

416.61	Fishing vessels and hulls therefor, n.e.s., designed for speeds of less than 17 knots when in full load (design) condition, incorporating any of the following special features: (a) deck or hull strengthening for weapons or special construction to accommodate or carry military equipment; (b) hull design suitable for direct beachings; (c) bow or stern doors; (d) any arrangements for demagnetizing or the provision of non-magnetic characteristics; (e) electrical generating capacity in abnormal excess of the needs for the vessel as a fishing vessel; (f) incorporating any Munitions List items 1/ and any of the following embargoed items: 485.10 (except the types specified in Interpretative Note No. 5), 501.10, 502.10, 510.10, and certain types of buoyant cable 2/.	A 5,7
416.62	Fishing vessels and hulls therefor, n.e.s., designed for speeds of less than 17 knots when in full load (design) condition, as follows: (a) wood or other non-magnetic hull of 60 feet (18 m) or more in length between perpendiculars, unless built before 1939, in which case 100 feet (30 m) or more in length, except the following vessels when their speed is not more than 10 knots and their electric generating capacity is under 35 KW: (1) Bonito and tuna vessels under 130 feet (40 m) in length between perpendiculars, either fitted with sponson platforms for line fishing or of the long line type; (2) seal fishing vessels under 130 feet (40 m) in length; (3) fishing cutters (Scandinavian type) under 100 feet (30 m) in length; (b) 200 feet (60 m) or more in length between perpendiculars; (c) maximum speed in deep load condition of 12½ knots or more; (d) total round trip range at design speed above 7000 miles, in fishing condition; (e) strengthening against ice beyond the requirements of Lloyd's or other Free World Classification Societies.	7
416.63	Fishing vessels and hulls therefor, with length between perpendiculars cover 50 feet (15 m) except those covered by items 416.10 and 416.64.	7

1/ This reference is to the International Munitions List.

2/ "Buoyant electric conducting cable suitable for sweeping magnetic mines-ILL430"

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>TRANSPORTATION EQUIPMENT (continued)</u>		
416.64	Fishing vessels, as follows:	7
	(a) steel bonito and tuna vessels over 50 feet (15 m) but under 130 feet (40 m) in length between perpendiculars, either fitted with sponson platforms for line fishing or of the long line type;	
	(b) cutters (i.e., small coastal fishing vessels), having the following characteristics:	
	(1) motor driven;	
	(2) fitted with sailing equipment;	
	(3) length between perpendiculars over 50 feet (15 m) but not over 81 ft. 3 in. (25m);	
	(4) beam not over 21 ft. 2 in. (6.4m);	
	(5) draught not over 8 ft. 1 in. (2.5 m);	
	(6) engine not over 120 hp, including a normal electric generator not over 5 KW.	
417.61	Whale catchers	7
417.62	Ships designed to accommodate 200 or more passengers.	A 5,7
417.63	Other merchant vessels, n.e.s., designed for speeds of less than 20 knots under when in full load (design)	7
417.64	Ships with any of the following characteristics:	A,C 5,7
	(a) bow and/or stern unloading arrangements including doors, ramps, and train or car-ferry layout;	
	(b) special design or facilities to permit launching or landing of aircraft;	
	(c) lifting gear over 50 tons capacity;	
	(d) deck or hull strengthening for weapons or special construction to accommodate or carry military equipment on or under deck;	
	(e) any arrangements for demagnetizing or the provision of non-magnetic characteristics;	
	(f) electrical generating capacity and/or fuel capacity in abnormal excess of the commercial needs of the vessel;	
	(g) strengthening against ice beyond the requirements of Lloyd's or other Free World Classification Societies;	
	(h) incorporating any Munitions List item 1/, and any of the following embargoed items: 485.10 (except the types specified in Interpretative Note No. 5), 501.10, 502.10, 510.10, and certain types of buoy and cable 2/.	

1/ This reference is to the International Munitions List.

2/ "Buoy and electric conducting cable suitable for sweeping magnetic mines-ILL430"

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>TRANSPORTATION EQUIPMENT (continued)</u>		
417.65	Other vessels, n.e.s.	7
430.61	Electric conducting cable, n.e.s., suitable for sweeping magnetic mines or for harbor defense.	A 5
430.62	Wire rope, strand and cord made of phosphor bronze or stainless steel suitable for aircraft.	A 5
441.50U	Marine steam boilers designed to operate at temperatures above 85 to 1100°F.	A,B,C 4,6
450.51U	Wheel tractors, front and rear drive, n.e.s., 135 brake hp and over.	B,C 4,6
450.52U	Off-the-road haulers, n.e.s., having an axle-load rating of 47,500 lbs or more for any one axle assembly (whether the axle assembly consists of one, two or dual axles).	B,C 4,6
450.53U	Tractors, two-wheel drive and tracklaying, n.e.s., of 135 brake hp and over.	B,C 4,6
450.54U	Industrial lift trucks of 145 brake hp and over.	B,C 4,6
450.61	Automotive vehicles or chassis, having both front and rear drives, n.e.s., and specially designed parts therefor, n.e.s.	C 7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
<u>ELECTRONICS AND PRECISION INSTRUMENTS</u>			
501.40	Radio communications, navigational aids and direction finding equipment, n.e.s.	A,B	3,5
503.60	Ionosphere and/or tropospheric sounding apparatus capable of use as a device for determining and/or measuring variations in electromagnetic propagation phenomena and/or through the use of such measurements, for detecting or locating physical sources of such phenomena.	A	5
514.60	Pulse modulators capable of providing electric impulses of peak power exceeding 10 KW up to and including 150 KW, <u>except</u> those of a duration of less than 0.1 microsecond; and pulse-transformer and pulse-forming equipment being specialized parts of such modulators.	A	5
517.60	Radio transmitters and components, n.e.s., <u>except</u> radio link and relay equipment, as follows: (a) transmitters or transmitter amplifiers designed to operate at output carrier frequencies from 217 up to and including 223 mc/s; (b) transmitters or transmitter amplifiers designed to provide any of the following features; (1) two or more independent modulation channels on one radio frequency carrier; (2) simultaneous output at more than one radio frequency carrier; (3) rapid selection, by means of preadjusted tuning controls, between four or more radio frequency carrier frequencies in equipment designed for operation in commercial moving vehicles; or between two or more radio frequency carrier frequencies in equipment not so designed; (4) modulation bandwidth greater than 4 KC at any carrier frequency within any of the bands 30 to 41 mc/s, 68 to 87.5 mc/s, 100 to 108 mc/s; (5) carrier output power, for static and transporable nets, greater than 100 watts, and for mobile sets greater than 25 watts, at any carrier frequency within any of the bands 30 to 41 mc/s, 68 to 87.5 mc/s, 100 to 108 mc/s; (6) special facilities for uses other than sound or vision broadcasting, mobile communications, fixed headquarters station for mobile services, or a mobile sound or vision link to a main broadcast station; (c) mobile communications equipment, or headquarters stations therefor, other than those types designed for and already in use in western countries for normal commercial civilian purposes; (d) components and sub-assemblies, including modulators and modulation amplifiers, specially designed for use in transmitters covered by subitems (a)(b) and (c).	A	5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
520.60	Short range and low power links for transmission between the camera or studio and the television transmitter.	A	5
524.60	Submarine cable, n.e.s.	A	5
529.40	Radio testing equipment, n.e.s.	A	3,5
533.60	Radio spectrum analyzers (being apparatus capable of indicating the single-frequency components of multi-frequency oscillations): (b) designed to operate at frequencies of 300 megacycles per second and less; and specialized parts of such analyzers.	A	5
535.60	Reactors (made of materials covered by item 631.10), n.e.s., as follows: (a) transformers, <u>except</u> power supply and power distribution types; (b) chokes and coils.	A	5
536.50U	Geophysical prospecting equipment, as follows: (a) seismometers; (b) gravimeters; (c) electronic or fluxgate magnetometers (including airborne magnetometers), <u>except</u> those covered by item 571.10; (d) complete seismic exploration recording equipment, portable or designed for truck mounting; and the following units when specifically designed and/or designated therefor: (1) amplifiers with automatic volume control; (2) variable filters; (3) synchronized timing-photographic recording equipment (including recording oscillographs), and parts specifically designed therefor; (4) geophones; and parts specifically designed therefor; (5) electromagnetically-damped galvanometers; (6) equipment for surface shooting, employing shaped charges.	B,C	4,6
537.60	Special tuned circuits, n.e.s., as follows: (a) electromagnetic waveguides, resonant circuits, and radiators of a kind used at frequencies exceeding 600 megacycles per second; (b) articles of equipment incorporating, or designed to be connected to or to be incorporated in, any such waveguide, circuit, or radiator.	A	5
541.60	Cathode ray tubes, as follows: (d) with screen afterglow longer than $\frac{1}{2}$ second, n.e.s.	A	5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
544.60	Crystal diodes specially designed for use at frequencies of 250 or more megacycles per second and specialized parts therefor, n.e.s.	A	5
545.40	Transistors, n.e.s.	A	3,5
549.60	Photomultiplier tubes, n.e.s., and specialized parts therefor.	A	5
555.60	Non-ruggedized vidicon tubes	A	5
558.60	Valves (tubes) electronic, n.e.s., and specialized parts, as follows: (a) those of a kind specially designed for use at frequencies between 250 and 300 megacycles per second; (b) indirectly heated valves of a kind that can be passed through a circular hole $\frac{1}{2}$ inch in diameter, but not through a hole 7.2 mm in diameter; (c) those designed to withstand accelerations of 450g up to and including 1000g.	A	5
568.40U	Electronic automatic controlling units, whether or not including associated regulating units, designed to regulate flow by continuous action as a function of one or more industrial process variables and capable of operating a regulating valve by pneumatic, hydraulic or electric means in response to an AC or DC voltage produced by a measuring unit in the process stream. Note: "Controlling unit" means the unit comprising those elements which apply control action to the regulating unit in relation to the deviation, which it determines by comparing (by using an electronic feedback stabilized amplifier) the desired value with the value of the controlled condition as indicated by the measuring unit.	B,C	2
582.50U	Optical curve generators capable of producing aspherical surfaces without the use of mating surfaces.	B	4
584.60	Oscilloscopes (cathode-ray) and specialized parts therefor, as follows: (c) oscilloscopes possessing any of the following characteristics: (1) a bandwidth greater than 5 megacycles (defined as the band of frequencies over which the loss does not exceed 3 decibels); (2) a time base shorter than 0.05 microseconds per centimeter; (d) oscilloscope amplifiers and pre-amplifiers having a bandwidth greater than 5 megacycles up to and including 12 megacycles.	A,B	5

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<u>Item N o.</u>	<u>Item Description</u>	<u>Criteria</u>
585.60	Photographic equipment, as follows: (d) high speed cameras capable of recording at rates in excess of 2000 frames per second, n.e.s.	A,B 5
591.60	Spectrographs, spectrometers, monochrometers, and associated measuring equipment, as follows: (a) grating types with, or designed for use with diffraction gratings (originals or replicas, plane or concave); and gratings therefor; (b) prism types: (1) capable of a spectrum length of 20 cms between 9000 and 2000 Angstrom units, or (2) designed for use with prisms having refracting face 35 mm or more in width; (c) infra-red types, having an effective total prism base length over 2 inches (5 cm); (d) recording or controlling densitometers or other specialized equipment for the quantitative measurement of spectra or spectrographic records. <u>Note:</u> This does not include: (1) instruments limited to the use of replica plane grating not exceeding 1 inch (2.5 cm) in ruled width, and spares therefor, and (2) instruments of the "circle" types incapable of direct measuring to less than 5 seconds of arc.	A,B 5
594.60	X-ray diffraction and electron diffraction equipment and accessories, as follows: (a) x-ray diffraction units; (b) x-ray tubes designed or intended for use in x-ray diffraction analysis; (c) powder cameras with heating element for temperatures of 500°C (932°F) or above; (d) single crystal oscillating and rotating x-ray goniometers with x-ray film or plate holders; (e) electron diffraction units and specialized components therefor.	A 5
595.60	Transits and tachymeters (tacheometers) having a telescope magnification of 20x or higher <u>and reading</u> direct to 1 sexagesimal minute or better, <u>and specially</u> fabricated parts and accessories.	5
596.60	Photo-theodolites; other theodolites having an accuracy of 1 sexagesimal second or better by direct reading or a telescope magnification of 20x or higher <u>and reading</u> direct to 1 sexagesimal minute or better; and specially fabricated parts and accessories, n.e.s.	5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
<u>METALS AND MINERALS</u>			
601.41	Ball and roller bearings, and parts, n.e.s., as follows: (a) ball and roller bearings and parts, n.e.s., with inner bore diameter 10 mm and under:	A,C	3,5
601.42	(b) ball and roller bearings and parts, n.e.s. with inner bore diameter 200 mm and over:	A,C	3,5
619.60	Steel blooms, slabs, billets, and hot-rolled bars specially prepared for the production of shells and projectiles.	A	5
630.60	Scrap iron and steel.		7
631.41	Magnetic metals of all types and of whatever form, e.g., powder, strip, sheet, castings, and blocks, if possessing one or more of the following characteristics: (f) a composition capable of an energy product greater than 2 times up to and including 6 times $10^6$ gauss/oersteds, or containing more than 20% up to and including 25% cobalt;	A	3,5
631.60	(h) thickness of 0.075mm or less down to 0.01mm; (i) initial permeability of 20,000 or over up to and including 50,000; (j) remanence 85% through 97% of maximum flux; (k) core loss of 0.5 watt per pound or less down to 0.45 watt per pound at B equals 13,000 gauss and 50 cycles per second.	A	5
635.60	Alloys containing: (f) containing 6 up to 10% molybdenum (or 3 up to 5% molybdenum and 14% chromium) or 0.25 up to 1.5% columbium and/or tantalum.	A,C	5
636.41	Nickel-bearing alloy steels having a nickel content of 6% or more and containing a combined nickel-chromium content of 22% or more.	A	3,5
636.60	Iron and steel strip and sheet, including alloy, n.e.s.		7
637.60	Aluminum, as follows: (a) aluminum hard alloys used in aircraft construction, as follows: (1) crude forms (primary and secondary), including ingots, pigs, blooms, slabs, billets, blocks, grains, granules, lumps, notched bars, pellets, wire bars; (2) semifabricated forms, as follows: (i) wrought or worked materials fabricated by rolling, drawing, extruding, forging, impact extruding, pressing and graining; (ii) cast material produced by casting in sand, die, metal or plaster moulds; (3) scrap.	A	5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>METALS AND MINERALS (continued)</u>		
650.50	Copper, as follows: (a) copper ores, residues, concentrates, regulus, and matte; (b) copper and copper alloy scrap and old metal; (c) copper and copper-base alloys in the form of anodes, cathodes, billets, blocks, blooms, cakes, ingots, ingot bars, pellets, pigs, shot, slabs, sticks, wire bars, and other unwrought shapes; (d) copper and copper-base alloy semifinished and finished products, as follows: sheets, strips, plates, rods (including wire rods and rolled wire), pipe and tubing, wire and cable (covered and uncovered).	A,C 5
652.60	Alloy steel mill products (including stainless), semi-finished and finished, n.e.s., made from steel of the vacuum melt process.	A,C 5
	Germanium, as follows:	
653.41	(c) germanium having a resistivity of 30 to 50 ohm per cm;	A 3,5
653.42	(d) germanium with a resistivity up to 30 ohm per cm;	A 3,5
	Molybdenum, as follows:	
658.50U	(c) molybdenum ores, concentrates and scrap	A,C 6
658.60	(d) molybdenum compounds containing more than 35% but less than 86% molybdenum.	A 5
	Nickel, as follows:	
661.42	(d) nickel, all forms, n.e.s.	A,C 3,5,7
672.60	Titanium carbide.	A 5
675.60	Carbon steel plates, not fabricated.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
<u>CHEMICALS AND PETROLEUM PRODUCTS</u>			
702.50U	Diester type hydraulic fluids	A,C	4
702.60	Other synthetic hydraulic fluids, n.e.s.	A	5
719.60	Dinitrotoluene.	A	5
720.60	Fluorinated hydrocarbons, as follows: (a) monobromotrifluoromethane (F-13-B-1); (b) dibromodifluoromethane (F-12-B-2).	A,C	5
725.60	2:4 dinitrophenol	A	5
727.60	Thiodiglycol and mixtures mainly thereof		7
737.60	Phosphorus, and phosphorous oxychloride and trichloride.		7
738.60	Methyl methacrylate, clear sheets or sheeting, whether single or laminated, suitable for aircraft use.	A	5
744.60	Pentaerythritol.	A	5
745.60	Potassium perchlorate.	A	5
746.60	Sodium perchlorate.	A	5
747.60	Nickel sulfate and nickel chloride.	A,C	5
750.60	Polyethylene with average molecular weight above 10,000.	A,C	5
755.50U	Diorgano siloxanes capable of being polymerized to rubber products.	A,C	4
764.60	Toluene.		7
766.50U	Polyvinylbutyral sheet.	A,C	4,6
768.60	Crude petroleum		7
769.60	Distillate fuel oils, including diesel oil.		7
770.60	Other jet fuel (aircraft turbine engine fuel) n.e.s.	A	5
772.60	Residual fuel oil.		7
	Gasoline, as follows:		
773.40U	(a) gasoline, aviation grade, 100/130 octane and above;	A	2
773.61	(b) gasoline, aviation grade, n.e.s.		7
773.62	(c) gasoline, motor		7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>CHEMICALS AND PETROLEUM PRODUCTS (continued)</u>		
744.60	Kerosene.	A 5
780.50U	Lubricating oils and greases, petroleum based.	C 6
781.60	Synthetic lubricating oils and greases (ester type), as follows: (a) aviation engine lubricating oils; (b) lubricating greases.	7
781.61	Lubricating oils, n.e.s., <u>except</u> in containers of 8 ounces or less, including raw or semirefined stocks, or distillates from which lubricants may be produced.	7
786.50U	Additives for lubricating oils and greases.	C 6
788.40	Tetra-ethyl-lead fluid.	A,C 3,5
788.60	Tetra-ethyl lead and any mixture containing more than 3 cc of tetra-ethyl lead per gallon (0.66cc per litre).	A,C 5
789.60	High octane blending agents for aircraft fuels, as follows: (d) codimer; (e) cumene (isopropyl benzene); (f) diisobutylene; (g) diisopropyl (2,3 dimethylbutane); (h) hydrocodimers; (i) hydropolymers; (j) iso octanes; (k) isoheptanes; (l) isohexanes; (m) neopentane; (n) triptane (2,2,3 trimethylbutane); (o) monomethylaniline; (p) isopropylether; (q) ethyl benzene.	7
793.60	Hydraulic fluids or oils, petroleum base, n.e.s.	7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>RUBBER AND RUBBER PRODUCTS</u>		
	Synthetic rubber, the following:	
801.41U	(c) silicone rubbers, n.e.s.	A,B,C 2
801.42U	(d) alkyl polysulphite polymers, crude or latex;	A,C 2
801.43U	(e) copolymers of methyl vinyl pyridine and butadiene;	C 2
801.44U	(f) S-type cold rubber;	A,C 2
801.45	(g) butyl rubber;	A,C 3,5
801.46	(h) N-type rubber;	A,C 3,5
801.47	(i) polyurethane rubber	C 3
806.60	Pneumatic tire casings (excluding tractor and farm implement types) of 10-ply rating or over in sizes 9:00 or over.	A 5

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>	
<u>MISCELLANEOUS</u>			
913.60	Metal bridges, portable and knockdown, and specially fabricated parts.	A	5
914.60	Miscellaneous military and naval equipment, n.e.s., and specially fabricated parts, n.e.s. (This includes, but is not limited to pontoons; paravanes; ammunition bags; boxes and lockers; cartridge bags and belts; daggers; field baking equipment; saber chains; sabers; scabbards; military swords; camouflage nets; kitchen mess equipment; ground heaters, portable; bayonets.)	A	5
915.60	Military apparel of all types and materials (new and used) <u>except</u> : underwear and undergarments; socks, stockings, and anklets; handkerchiefs; neckties; trouser belts and suspenders; gloves and mittens (other than electrically heated); shoes, boots, slippers and overshoes (other than electrically heated and specially insulated); rain hats; sweaters, mufflers, and scarves; leggings; cotton trousers and cotton shirts (other than Army and Marine Corps fatigue and field types); wearing apparel manufactured in the U.S. for any uniformed branch or service of a foreign country such as the military forces of that country, military academies, police forces, customs officials, airline and airport personnel, etc., provided not identical to any U.S. military apparel; and other military outer wearing apparel that has been dyed or otherwise altered so that it can be readily distinguished from parts of the U.S. Army, Navy, Air Force, Marine Corps, and Coast Guard uniforms.	A	5
916.60	Parts and accessories, n.e.c., specially fabricated, for military watercraft, <u>except</u> converted.	A	5
917.60	Mechanical cotton pickers, and specially designed parts.		7
930.60	Parachute cloth made of synthetic fiber.	A	5
940.61	Marine propeller shafts 2 $\frac{1}{2}$ inch and over in diameter.	A	5
940.62	Marine transmissions designed to operate at 1000 hp and over.	A	5
950.61	Reciprocating compressor units, over 10 hp, having a designed capacity of 60 cfm or over, and all flow-contact surfaces made of aluminum, nickel or alloy containing 60% or more nickel, and specially fabricated parts.		7

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<u>Item No.</u>	<u>Item Description</u>	<u>Criteria</u>
<u>MISCELLANEOUS (continued)</u>		
950.62	Reciprocating compressor units: (a) requiring a drive unit rated at 900 hp or more, or (b) requiring a drive unit rated at 300 hp or more when designed for a delivery pressure exceeding 450 psi; (c) specially fabricated parts.	7
950.63	Centrifugal refrigerating units: (a) requiring a drive unit rated at 900 hp or more, or (b) requiring a drive unit rated at 300 hp or more when designed for a delivery pressure exceeding 450 psi; (c) specially fabricated parts.	7
950.64	Centrifugal refrigerating units having a designed capacity of 60 cfm or over, and all flow-contact surfaces made of aluminum, nickel, or alloy containing 60% or more nickel, and specially fabricated parts.	7
960.60	Electronic physical properties testing and products testing and inspecting machines and equipment, incorporating circuitry designed to use one or more electronic tubes or transistors, and specially fabricated parts and accessories, n.e.s., when specially designed for use with items for which there is a presumption for denial to the Soviet Bloc.	A,B,C 1,5
970.60	Aircraft training equipment, n.e.s. and ground handling and maintenance equipment, and specially fabricated parts and accessories, n.e.s. (specially designed for training aviation personnel and for ground handling and maintenance of aircraft) as follows: Test, check-out and calibration equipment having one or more electronic components (incorporating one or more electronic tubes or transistors), and specially fabricated parts, n.e.s.	A 5

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Should Coverage of Treasury's Transaction Controls be Expanded?

One anti-frustration technique available to buttress U. S. unilateral controls toward Soviet bloc is Treasury's Transaction Controls which have always been limited in application to items under multilateral embargo or items on the AEC or Munitions Control Board List. This control can to a limited extent extend U. S. denial policies extra-territorially to activities of U. S. firms and individuals abroad and activities of foreign firms subject to this control.

Question: Should transaction controls be extended to cover items now subject to unilateral U. S. export controls? If so, over what coverage in terms of item listings and transaction participants?

Commerce and Defense favor extending transaction controls to cover all U. S. unilateral denial areas of materials, equipment, technical data and technical services which will effectively assure comparable treatment of U. S. firms' or individuals' export activity within the U. S. and abroad. Recognizing the difficulties which full implementation may bring to foreign policy considerations, Commerce and Defense would be willing to accept expansion of transaction controls to cover the following:

1. Technical data and services relating to items for which multilateral embargo has been agreed; (involves coverage of U. S. firms, their foreign subsidiaries and foreign firms subject to their control);
2. Exports from foreign sources by firms domiciled in the U. S. of materials, equipment, technology and services over which U. S. unilateral export controls have been determined to be effective; (Excludes coverage of firms, foreign subsidiaries and foreign firms subject to their control; thus minimizes impact foreign policy concern); and
3. Over such other exports as may be determined on a case-by-case basis to be both feasible or appropriate which will achieve through unilateral U. S. action an effective impact on the Soviet bloc in terms of U. S. policy objectives.

Commerce and Defense believe that these proposals would provide adequate opportunity for reflecting foreign policy concern. They also believe such action would materially assist achieving most effective impact of unilateral U. S. controls and would not produce serious friction with other friendly governments.

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Treasury views its function in applying transaction controls as supplementing the enforcement of the Government's export control program. It is willing to apply its controls to such areas as the interested agencies may agree are necessary. Treasury's principal desires are to be sure its controls make an effective contribution and that they involve a minimum of discrimination of a type which might undermine the administration of its controls. It would prefer that any further transaction controls suggested be limited to selected areas in which the control will clearly increase the effective impact on the Soviet bloc and that it apply to all U. S. or U. S. controlled participants as at present. It would oppose any extension of these controls if such extension were to weaken its ability to apply its controls as they presently exist and it has grave concern that this might be an effect of an extension.

In general, Treasury does not believe that American-controlled firms abroad produce important technical data in significant quantities. To the extent, however, that technical data relating to merchandise which is itself covered by the Transaction Control Regulations is originated abroad by American-controlled firms, Treasury would see no objection in principle to covering such technical data under the Transaction Controls, subject, however, to the same observations as previously stated regarding any extension of the Transaction Control Regulations. It should be noted, however, that the application of Transaction Control Regulations to technical data (and to a certain extent these Regulations have been so applied on an interia basis while Commerce considers the matter) only goes to a minor part of the problem. It seems to Treasury that the controls over technical data, to the extent that they are needed, are required across the board--and this over-all mandatory control can only be accomplished under the Export Control Regulations. In other words, the major aspect of the problem is where a foreign, non-American controlled, company obtains technical data from a firm in the United States and sends it, or its fruits, to the Soviet bloc--and this type of conduct cannot well be reached under the Transaction Control Regulations.

An effective Commerce mandatory export control program over all technical data shipments of a strategic nature could not only prevent the onward transmission of technical data to the Soviet bloc but also could ensure that products manufactured abroad on the basis of technical data exported from the United States are precluded by provisions in licensing agreements, or otherwise, from going to Soviet bloc destinations. This is a type of control which Commerce previously enforced but has abandoned.

State opposes any expansion of transaction controls beyond the area of applicability agreed internationally - COCOM embargoed items. State believes that any expansion would be detrimental to U. S. foreign relations, would increase adverse reaction by foreign governments such as recent reaction by Canada, would be viewed by COCOM member governments as act of bad faith with regard to recent U. S. Agreements at the Consultative Group meeting in mid-1958 and would not be effective in preventing the Soviet bloc from securing identical materials from non-U.S. controlled foreign firms.

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